

solid state communications

an international journal

volume 114



Pergamon

SOLID STATE COMMUNICATIONS
EDITOR-IN-CHIEF, MANUEL CARDONA **ASSOCIATE EDITOR-IN-CHIEF, ARON PINCZUK**
BOARD OF EDITORS

Editor	E-mail address
H. AKAI, <i>Japan</i>	akai@phys.sci.osaka-u.ac.jp
P. BURLET, <i>France</i>	burlet@drfmc.ceng.cea.fr
C. CALANDRA, <i>Italy</i>	calandra@imoax1.unimo.it
K.-A. CHAO, <i>Sweden</i>	koung-an.chao@teorfys.lu.se
R.G. CLARK, <i>Australia</i>	rgc@newt.phys.unsw.edu.au
M.F. COLLINS, <i>Canada</i>	mcollins@mcmill.cis.mcmaster.ca
J.H. DAVIES, <i>U.K.</i>	jdavies@elec.gla.ac.uk
P.H. DEDERICHS, <i>Germany</i>	p.h.dederichs@fz-juelich.de
F.J. DISALVO, <i>U.S.A.</i>	fd3@cornell.edu
R.C. DYNES, <i>U.S.A.</i>	rcd@ucsd.edu
A.L. EFROS, <i>U.S.A.</i>	efros@physics.utah.edu
H. ESCHRIG, <i>Germany</i>	h.eschrig@ifw-dresden.de
Z.Z. GAN, <i>People's Republic of China</i>	zzgan@ibm320h.phy.pku.edu.cn
C.E.T. GONÇALVES DA SILVA, <i>Brazil</i>	cylon@lnls.anp.br
M. GRYNBERG, <i>Poland</i>	grynberg@fuw.edu.pl
M. HEIBLUM, <i>Israel</i>	heiblum@wis.weizmann.ac.il
E.L. IVCHENKO, <i>Russia</i>	ivchenko@coherent.ioffe.rssi.ru
B. JUSSERAND, <i>France</i>	bernard.jusserand@cnet.francetelecom.fr
H. KAMIMURA, <i>Japan</i>	kamimura@klabsun.yy.kagu.sut.ac.jp
L.V. KELDYSH, <i>Russia</i>	keldysh@sci.lebedev.ru
J. KUHL, <i>Germany</i>	kuhl@servix.mpi-stuttgart.mpg.de
D.J. LOCKWOOD, <i>Canada</i>	david.lockwood@nrc.ca
H. VON LÖHNESEN, <i>Germany</i>	h.vl@phys.uni-karlsruhe.de
S.G. LOUIE, <i>U.S.A.</i>	louie@jungle.berkeley.edu
A.H. MACDONALD, <i>U.S.A.</i>	ssc@gibbs.physics.indiana.edu
E.E. MENDEZ, <i>U.S.A.</i>	emilio.mendez@suny.edu
E. MOLINARI, <i>Italy</i>	molinari@unimo.it
C.A. MURRAY, <i>U.S.A.</i>	camurray@lucent.com
R.T. PHILLIPS, <i>U.K.</i>	rtp1@phy.cam.ac.uk
C.N.R. RAO, <i>India</i>	cnrrao@jncasr.ac.in
J.F. SADOC, <i>France</i>	sadoc@lps.u-psud.fr
P. SHENG, <i>China</i>	phsheng@ust.hk
T. TSUZUKI, <i>Japan</i>	tsuzuki@cmpt01.phys.tohoku.ac.jp
S. USHIODA, <i>Japan</i>	ushioda@ushioda.riec.tohoku.ac.jp
D.E. VAN DYCK, <i>Belgium</i>	van_dyck@ruca.ua.ac.be
P. WACHTER, <i>Switzerland</i>	wachter@solid.phys.ethz.ch
F. YNDURÁIN, <i>Spain</i>	yndurain@polar.fmc.uam.es
A. ZAWADOWSKI, <i>Hungary</i>	zawa@phy.bme.hu

PRODUCTION CONTACT

RAM Journals, Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K.
E-mail: ssc@elsevier.co.uk

SOLID STATE COMMUNICATIONS is a companion journal to THE JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS.

Publishing Offices: Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010, U.S.A.; Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K. Tel., Oxford (01865) 843000. Fax., Oxford (01865) 843010.

Advertising information. Advertising orders and enquiries can be sent to: **USA, Canada and South America:** Mr Tino de Carlo, The Advertising Department, Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010-5107, U.S.A.; phone: (+1) (212) 633 3815; fax: (+1) (212) 633 3820; e-mail: t.decarlo@elsevier.com. **Japan:** The Advertising Department, Elsevier Science K.K., 9-15 Higashi-Azabu 1-chome, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5033; fax: (+81) (3) 5561 5047. **Europe and ROW:** Rachel Leveson-Gower, The Advertising Department, Elsevier Science Ltd., The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K.; phone: (+44) (1865) 843565; fax: (+44) (1865) 843976; e-mail: r.leveson-gower@elsevier.co.uk

Publication information: *Solid State Communications* (ISSN 0038-1098). For 2000, volumes 113–116 are scheduled for publication. Subscription prices are available upon request from the Publisher or from the Regional Sales Office nearest you or from this journal's website (<http://www.elsevier.nl/locate/ssc>). Further information is available on this journal and other Elsevier Science products through Elsevier's website: (<http://www.elsevier.nl>). Subscriptions are accepted on a prepaid basis only and are entered on a calendar year basis. Issues are sent by standard mail (surface within Europe, air delivery outside Europe). Priority rates are available upon request. Claims for missing issues should be made within six months of the date of dispatch.

Orders, claims and product enquiries: please contact the Customer Support Department at the Regional Sales Office nearest you: **New York:** Elsevier Science, PO Box 945, New York, NY 10159-0945, U.S.A.; phone: (+1) (212) 633 3730 [toll free number for North American customers: 1-888-4ES-INFO (437-4636)]; fax: (+1) (212) 633 3680; e-mail: usinfo-f@elsevier.com. **Amsterdam:** Elsevier Science, PO Box 211, 1000 AE Amsterdam, The Netherlands; phone: (+31) 20 4853757; fax: (+31) 20 4853432; e-mail: nlinfo-f@elsevier.nl. **Tokyo:** Elsevier Science, 9-15 Higashi-Azabu 1-chome, Minato-ku, Tokyo 106, Japan; phone: (+81) (3) 5561 5033; fax: (+81) (3) 5561 5047; e-mail: info@elsevier.co.jp. **Singapore:** Elsevier Science, No. 1 Temasek Avenue, #17-01 Millenia Tower, Singapore 039192; phone: (+65) 434 3727; fax: (+65) 337 2230; e-mail: asiainfo@elsevier.com.sg. **Rio de Janeiro:** Elsevier Science, Rua Sete de Setembro 111/16 Andar, 20050-002 Centro, Rio de Janeiro-RJ, Brazil; phone: (+55) (21) 509 5340; fax: (+55) (21) 507 1991; e-mail: elsevier@campus.com.br [Note (Latin America): for orders, claims and help desk information, please contact the Regional Sales Office in New York as listed above]

Back Issues: Back issues of all previously published volumes, in both hard copy and on microform, are available direct from Elsevier Science offices (Oxford, New York). Periodicals postage is paid at Rahway, NJ. *Solid State Communications* (ISSN 0038-1098) is published four issues per month January to December in four volumes, by Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K. The US subscription price is \$3311 per year.

POSTMASTER: Send address corrections to *Solid State Communications*, c/o Elsevier Science Regional Sales Office, Customer Support Department, 655 Avenue of the Americas, New York, NY 10010, U.S.A.

Distributed in the U.S.A. by Mercury Airfreight International, 365 Blair Rd, Avenel, NJ 07001, U.S.A.

VOLUME 114, NUMBER 1
(Published 7 March 2000)

CONTENTS

	v	Editorial Note
A.Yu. Galkin, Y. Kopelevich, P. Esquinazi, A. Setzer, V.M. Pan and S.N. Barilo	1	Effect of the sample geometry on the second magnetization peak in single crystalline $\text{Ba}_{0.63}\text{K}_{0.37}\text{BiO}_3$ thick film
S. Chaudhary, A.K. Rajarajan, K.J. Singh, S.B. Roy and P. Chaddah	5	History dependence of peak effect in CeRu_2 and V_3Si : an analogy with the random field Ising systems
V.V. Ponomarenko and N. Nagaosa	9	Impurity pinning in transport through 1D Mott–Hubbard and spin gap insulators
E. Sjöstedt, L. Nordström and D.J. Singh	15	An alternative way of linearizing the augmented plane-wave method
D. Xue, K. Betzler, H. Hesse and D. Lammers	21	Nonlinear optical properties of borate crystals
M.-H. Whangbo, H.-J. Koo and K.-S. Lee	27	Analysis of nearest-neighbor spin exchange interactions by molecular orbital calculations: anisotropic spin exchange interactions in MV_3O_7 ($\text{M} = \text{Cd}, \text{Ca}, \text{Sr}$) and α' - NaV_2O_5
Z. Gaburro, G. Pucker, P. Bellutti and L. Pavesi	33	Electroluminescence in MOS structures with Si/SiO_2 nanometric multilayers
M. Palczewska, A. Wolos, M. Kaminska, I. Grzegory, M. Bockowski, S. Krukowski, T. Suski and S. Porowski	39	Electron spin resonance of erbium in gallium nitride
Y.-H. Huang, Z.-G. Xu, C.-H. Yan, Z.-M. Wang, T. Zhu, C.-S. Liao, S. Gao and G.-X. Xu	43	Soft chemical synthesis and transport properties of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ granular perovskites
Z.T. de Oliveira Jr. and M.C. dos Santos	49	Relative stability of polarons and bipolarons in emeraldine oligomers: a quantum chemical study
Y. Lu, Y. Gao, R. Yu and J. Zheng	55	Phonon sidebands of exciton bound to NN_1 traps in $\text{GaAs}_{1-x}\text{P}_x$: N alloys
	I	Keywords

VOLUME 114, NUMBER 2
(Published 10 March 2000)

CONTENTS

P.C. Morais, C.B. Teixeira, K. Skeff Neto, R.B. Azevedo, Z.G.M. Lacava and L.M. Lacava	59	Magnetic behavior of zero-field-frozen ferrofluid
F.M. Munteanu, Y. Kim, C.H. Perry, D.G. Rickel, J.A. Simmons and J.L. Reno	63	Photoluminescence detected enhancement of the electron–hole exchange interaction in a quantum well
K. Morigaki and H. Hikita	69	Light-induced creation and annihilation of two types of dangling bonds in a-Si:H: their relative densities during illumination
M. Taniguchi, Y. Misaki and K. Tanaka	75	Theoretical estimation of the electron–molecular vibration coupling in several organic donor molecules
W. Teizer, F. Hellman and R.C. Dynes	81	Magnetic field induced insulator to metal transition in amorphous- $\text{Gd}_x\text{Si}_{1-x}$
A. Das, S.K. Paranjpe, P. Raj, A. Satyamoorthy, K. Shashikala and S.K. Malik	87	Magnetic ordering in UNiSi_2

T. Mazet, O. Isnard and B. Malaman	91	Neutron diffraction and ^{57}Fe Mössbauer study of the HfFe_6Ge_6 -type RFe_6Ge_6 compounds ($\text{R} = \text{Sc}, \text{Ti}, \text{Zr}, \text{Hf}, \text{Nb}$)
H.T. Cao and D.B. Tran Thoai	97	Double plasmon-pole for highly excited quantum-well wires
W. Duan, J.-L. Zhu, B.-L. Gu and J. Wu	101	Electron–optical–phonon scattering in non-square quantum-well structures
L. Chen, C. Dong, Y.Z. Huang, F. Zhou, G.C. Che and Z.X. Zhao	107	Superconducting phase with T_c of 17 K in $\text{La}_2\text{CuO}_{4+\delta}$
G.X. Lu, L.Q. Yang and J.H. Lin	113	One-dimensional magnetic interaction in $\text{BaMn}_2\text{Si}_2\text{O}_7$
	I	Keywords

VOLUME 114, NUMBER 3
(Published 21 March 2000)

CONTENTS

R.B. Chen and Y.-T. Lu	117	Critical thickness of quantum well for observing Franz–Keldysh oscillation
T. Horikawa, T. Kinoshita, K. Suito and A. Onodera	121	Compressibility measurement of C_{60} using synchrotron radiation
N. Choudhury and S.L. Chaplot	127	Free energy and relative stability of the enstatite $\text{Mg}_2\text{Si}_2\text{O}_6$ polymorphs
A. Salnick, J. Opsal, A. Rosencwaig and A. Mandelis	133	Nonlinear fundamental photothermal response: experimental results for tungsten
S.K. Deb, J. Dong, H. Hubert, P.F. McMillan and O.F. Sankey	137	The Raman spectra of the hexagonal and cubic (spinel) forms of Ge_3N_4 : an experimental and theoretical study
A. Roy, S. Kumar, D. Banerjee and J. Ghose	143	Mössbauer studies on titanium substituted molybdenum ferrite
V. Tsurkan, M. Demeter, B. Schneider, D. Hartmann and M. Neumann	149	Exchange splitting of the Cr, Fe and Mn 3s XPS spectra in some ternary magnetic semiconductor sulphides
C.L. Laroche, M.A. Omary, H.H. Patterson, P. Fischer, F. Fauth, P. Allenspach, B. Lucas and P. Pattison	155	Optical, synchrotron X-ray and neutron diffraction investigations of structural changes in the layered compound $\text{K}_2\text{Na}[\text{Ag}(\text{CN})_2]_3$
G. Perna, S. Pagliara, V. Capozzi, M. Ambrico and M. Pallara	161	Excitonic luminescence of $\text{CdS}_x\text{Se}_{1-x}$ films deposited by laser ablation on Si substrate
M.T. Liu and C.S. Chu	167	Effects of an impurity on the dissipation in a partially coherent flux-driven ring
W. Kempin'ski, L. Piekara-Sady, E.A. Katz, A.I. Shames and S. Shtutina	173	C_{60}^+ defect centers: effect of rubidium intercalation into C_{60} studied by EPR
	I	Keywords

VOLUME 114, NUMBER 4
(Published 24 March 2000)

CONTENTS

Research Paper

L. Yi and P. Sheng

v Editorial Note

177	Breit interaction, level spacing statistics and far-infrared absorption in small metal clusters
-----	---

Communications

- | | | |
|--|-----|---|
| S.-H. Lin, J. Braddock-Wilking and B.J. Feldman | 193 | Chlorine and nitrogen doped carbon grown from a tetrachloro-ethylene and nitrogen feedstock |
| K. Tanaka, H. Uchiki, S. Iida, T. Terasako and S. Shirakata | 197 | Biexciton luminescence from CuGaS ₂ bulk single crystals |
| K. Aoki | 203 | Turing bifurcation during the nucleation process of a current density filament in n-GaAs |
| S. Wasa, K. Suito, M. Kobayashi and A. Onodera | 209 | Pressure-induced irreversible amorphization of C ₇₀ fullerene |
| K. Okazaki and Y. Teraoka | 215 | Electron-self-confinement in an electron gas with an intermediate electron density |
| J. Hu, H. Qin, L. Zhang, Y. Wang and Z. Wang | 219 | Frequency dependencies of magnetoimpedance and magnetoimpedance phase in amorphous (Co _{0.85} Fe _{0.06} Cr _{0.02} Ni _{0.07}) ₇₅ Si ₁₀ B ₁₅ ribbon |
| N. Harish Kumar and S.K. Malik | 223 | Magnetic behaviour of RRhAl (R = La, Ce, Pr, Nd and Gd) compounds |
| F. Findeis, A. Zrenner, G. Böhm and G. Abstreiter | 227 | Optical spectroscopy on a single InGaAs/GaAs quantum dot in the few-exciton limit |
| Z.Q. Kuang, J.X. Zhang, X.H. Zhang, K.F. Liang and P.C.W. Fung | 231 | Scaling behaviours in the thermoelastic martensitic transformation of Co |
| D.P. Feng, Y. Zhao, C.C. Sorrell and G.Y. Zhang | 237 | Anisotropic defect structure of GaN film grown by MOCVD |
| | I | Author Index |
| | V | Keywords |

VOLUME 114, NUMBER 5

(Published 11 April 2000)

CONTENTS

- | | | |
|---|-----|---|
| Y. Kopelevich and P. Esquinazi | 241 | Vortex lattice depinning vs. vortex lattice melting: a pinning-based explanation of the equilibrium magnetization jump |
| G. Seifert, H. Terrones, M. Terrones, G. Jungnickel and T. Frauenheim | 245 | On the electronic structure of WS ₂ nanotubes |
| A.R. James, A. Pignolet, S. Senz, N.D. Zakharov and D. Hesse | 249 | Growth and characterization of epitaxial Ba ₂ Bi ₄ Ti ₅ O ₁₈ films deposited by pulsed laser ablation |
| T. Yoshida, T. Tanaka, S. Yoshida, S. Hikita, T. Baba and Y. Ono | 255 | EXAFS Study of Yb species encapsulated in potassium Y-type zeolite |
| B.N.J. Persson and V.L. Popov | 261 | On the origin of the transition from slip to stick |
| T. Kanki, H. Tanaka and T. Kawai | 267 | Enhancement of magnetoresistance at room temperature in La _{0.8} Ba _{0.2} MnO ₃ epitaxial thin film |
| A. Kazimirov, L.X. Cao, G. Scherb, L. Cheng, M.J. Bedzyk and J. Zegenhagen | 271 | X-ray standing-wave analysis of the rare-earth atomic positions in RBa ₂ Cu ₃ O _{7-δ} thin films |
| D. Mo, Z.J. Jiang and N. Ke | 277 | Determination of fractional dimension of low-dimensional solids by electron paramagnetic resonance |
| T. Yamamoto, H. Tajima and R. Kato | 281 | Magnetic susceptibility of (DMe-DCNQI) ₂ Li _{1-x} Cu _x |
| G.V. Benemanskaya, D.V. Daineka and G.E. Frank-Kamenetskaya | 285 | Electronic properties of the Cs covered GaAs(100) Ga-rich surface |
| C.K. Shu, W.H. Lee, Y.C. Pan, C.C. Chen, H.C. Lin, J. Ou, W.H. Chen, W.K. Chen and M.C. Lee | 291 | Optical and electrical investigations of isoelectronic In-doped GaN films |

S. Parashar, E.E. Ebenso, A.R. Raju and
C.N.R. Rao

295 Insulator–metal transitions induced by electric and magnetic
fields, in thin films of charge-ordered $\text{Pr}_{1-x}\text{Ca}_x\text{MnO}_3$

I Keywords

VOLUME 114, NUMBER 6

(Published 13 April 2000)

CONTENTS

M.A. Ojeda-López

301 Noncollinear magnetic order in antiferromagnetic and weak-
ferromagnetic transition-metal clusters

J.T. Devreese, S.N. Klimin, V.M. Fomin and
F. Brosens

305 Optical absorption of a many-polaron system confined in a
quantum dot

I.G. Kim, T.H. Yeom, S.H. Choh, K.S. Hong,
Y.M. Yu and E.S. Choi

311 ^{27}Al NMR relaxation studies of an emerald single crystal

A.V. Soldatov and G.E. Yalovega

315 Local structure of Se in cancrinite: X-ray absorption fine
structure theoretical analysis

A.R. Lim, K.S. Hong and S.-Y. Jeong

321 New phase transition studied by proton magnetic resonance in a
[$\text{N}(\text{CH}_3)_4$] $_2\text{CuCl}_4$ single crystal

M.H. Lee, K.J. Kim and E. Oh

325 Ellipsometric investigation of optical constant and band gap of
 $\text{Ga}_{1-x}\text{In}_x\text{N}/\text{GaN}$ ($x \leq 0.12$) heterostructures

P.U. Sastry, D. Sen, S. Mazumder and
K.S. Chandrasekaran

329 Structural variations in lignite coal: a small angle X-ray scattering
investigation

M.J. Peters, M. Grimsditch and A. Polian

335 High-pressure Raman scattering from GaPO_4

C.-S. Xiong, L. Pi, Y.-H. Xiong, Y.-B. Jia,
G.-E. Zhou, Z.-P. Jian and X.-G. Li

341 The preparation and demonstration of epitaxial $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_{3-\delta}$
films/((110) orientation)

H. Li, X. Tang, Q. Li, Y. Liu, Z. Tang, Y. Zhang
and D. Mo

347 Optical functions of Ca-modified PbTiO_3 thin films determined
by spectroscopic ellipsometry

F. Comas and N. Studart

351 A test of the Fokker–Planck approach for the description of
semiconductor transport properties

I Keywords

VOLUME 114, NUMBER 7

(Published 18 April 2000)

CONTENTS

J.S. Dyck, K. Kim, S. Limpijumnong,
W.R.L. Lambrecht, K. Kash and J.C. Angus

355 Identification of Raman-active phonon modes in oriented
platelets of InN and polycrystalline InN

Y. Luspín, D. De Sousa Meneses and P. Simon

361 New Brillouin spectroscopy results in CsHSeO_4 between room
temperature and the superionic transition

M. Deng, H. Freyer and H. Ebert

365 Spin and orbital magnetic susceptibility of the alloy system
 $\text{Ag}_x\text{Pt}_{1-x}$

A.M. Panich and Th. Doert

371 Indirect nuclear exchange and electronic structure of Tl_2Te_3
semiconductor: ^{203}Tl and ^{205}Tl NMR study

C.V. Dharmadhikari, A.O. Ali, N. Suresh,
D.M. Phase, S.M. Chaudhari, V. Ganesan,
A. Gupta and B.A. Dasannacharya

377 Dynamic scaling in growth of platinum films on $\text{Si}(100)$

L.F. Mao, J.L. Wei, Ch.H. Tan and M.Zh. Xu	383	Determination of the effective mass of ballistic electrons in thin silicon oxides films using tunneling current oscillations
D. Martins, C. Gourdon, P. Lavallard and R. Planel	389	AlAs monolayer dependence of the radiative recombination rate in a type II GaAs–AlAs double quantum well
V.N. Popov, V.E. Van Doren and M. Balkanski	395	Elastic properties of crystals of single-walled carbon nanotubes
Yu.A. Mamaev, A.V. Subashiev, Yu.P. Yashin, H.-J. Drouhin and G. Lampel	401	Energy resolved spin-polarised electron photoemission from strained GaAs/GaAsP heterostructure
	I	Keywords

VOLUME 114, NUMBER 8

(Published 27 April 2000)

CONTENTS

O.Yu. Gorbenko, A.R. Kaul, A.A. Bosak, I.E. Graboy, H.W. Zandbergen, V.L. Svetchnikov, N.A. Babushkina, L.M. Belova and K.I. Kugel	407	$(\text{La}_{1-x}\text{Pr}_x)_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ colossal magnetoresistive thin films on yttria stabilized zirconia
J.S. Kim, D. Hall, K. Heuser and G.R. Stewart	413	Indications of non-Fermi liquid behavior at the metamagnetic transition of UPt_3
A. Malinowski and R.T. Harley	419	Dynamic nuclear Overhauser shifts in Larmor beats from a quantum well
S. Hughes and D.S. Citrin	423	Electron–hole scattering in a highly excited semiconductor quantum well amplifier with terahertz-field-drifted carrier distributions: applications to all-optical switching
R. Mahendiran, M. Hervieu, A. Maignan, C. Martin and B. Raveau	429	Coexistence of ferromagnetism and charge ordering in $\text{Pr}_{0.5}\text{Ca}_{0.5}\text{Mn}_{1-x}\text{Cr}_x\text{O}_3$
B. Schreder, A. Materny, W. Kiefer, T. Kümmell, G. Bacher, A. Forchel and G. Landwehr	435	Length dependence of the longitudinal optical phonon properties in CdZnSe/ZnSe quantum wires
L. Uba, S. Uba, V.N. Antonov, A.N. Yaresko, A.Ya. Perlov, T. Ślęzak and J. Korecki	441	Giant magneto-optical anisotropy in Fe/Au monoatomic multilayer
A.R. Lima, P.M.C. de Oliveira and T.J.P. Penna	447	Broad histogram method for multiparametric Hamiltonians
	I	Author Index
	VII	Keywords

VOLUME 114, NUMBER 9

(Published 28 April 2000)

CONTENTS

Y. Yamamura, N. Nakajima and T. Tsuji	453	Heat capacity anomaly due to the α -to- β structural phase transition in ZrW_2O_8
K.J. Kim, S.J. Lee and D.W. Lynch	457	Study of optical properties and electronic structure of ferromagnetic FeCo
Y. Ma, J. Shen and X. Xu	461	Coupling effects in ferroelectric superlattice
D.D. Sarma, E.V. Sampathkumaran, S. Ray, R. Nagarajan, S. Majumdar, A. Kumar, G. Nalini and T.N. Guru Row	465	Magnetoresistance in ordered and disordered double perovskite oxide, $\text{Sr}_2\text{FeMoO}_6$
Y. Kunimi, S. Seki and S. Tagawa	469	Investigation on hole drift mobility in poly(<i>n</i> -hexylphenylsilane)

- | | | |
|---|-----|---|
| D.H. Kim, D.-W. Kim, B.S. Kang, T.W. Noh,
D.R. Lee, K.-B. Lee and S.J. Lee | 473 | Electrical properties of $\text{SrVO}_3/\text{SrTiO}_3$ superlattices grown by laser molecular beam epitaxy |
| H.X. Zhang, C.H. Kam, Y. Zhou, Y.C. Chan,
Y.L. Lam, L.S. Qiang and C.Q. Xu | 477 | SIMS analysis and optical study of annealed iron-doped LiNbO_3 crystal |
| A. Frydman, T.L. Kirk and R.C. Dynes | 481 | Superparamagnetism in discontinuous Ni films |
| I.G. de Oliveira, A. Caldas, E.P. Nobrega,
N.A. de Oliveira and P.J. von Ranke | 487 | The influence of the quadrupolar interaction in the magneto-caloric effect |
| R.R. Kumar, A.K. Bhatnagar and B.C.V. Reddy | 493 | EPR and optical absorption of Cu^{2+} ions in ternary $\text{K}_2\text{SO}_4\text{--Na}_2\text{SO}_4\text{--ZnSO}_4$ glasses |
| V.R. Misko, V.M. Fomin, J.T. Devreese and
V.V. Moshchalkov | 499 | On the Ginzburg–Landau analysis of a mixed $s\text{--}d_{x^2-y^2}$ -wave superconducting mesoscopic square |
| | I | Keywords |

VOLUME 114, NUMBER 10

(Published 5 May 2000)

CONTENTS

- | | | |
|--|-----|---|
| H.K. Shin, D.J. Lockwood and J.-M. Baribeau | 505 | Strain in coherent-wave SiGe/Si superlattices |
| D. Nesheva and H. Hofmeister | 511 | Formation of CdSe nanoclusters in SiO_x thin films |
| M. Dabbicco and M. Brambilla | 515 | Dispersion of the two-photon absorption coefficient in ZnSe |
| K. Takemoto, B.-R. Hyun and Y. Masumoto | 521 | Heterodyne-detected accumulated photon echo in CdSe quantum dots |
| R.J. Hemley, J. Shu, M.A. Carpenter, J. Hu,
H.K. Mao and K.J. Kingma | 527 | Strain/order parameter coupling in the ferroelastic transition in dense SiO_2 |
| D. Braithwaite, T. Nagata, I. Sheikin, H. Fujino,
J. Akimitsu and J. Flouquet | 533 | Upper critical field of the spin ladder system $\text{Sr}_{2.5}\text{Ca}_{11.5}\text{Cu}_{24}\text{O}_{41}$ |
| N.R. Serebryanaya and L.A. Chernozatonskii | 537 | Modelling and interpretation of the experimental data on the 3D polymerized C_{60} fullerites |
| E. Dujardin, C. Meny, P. Panissod, J.-P. Kintzinger,
N. Yao and T.W. Ebbesen | 543 | Interstitial metallic residues in purified single shell carbon nanotubes |
| D.M. Hoffman, B.K. Meyer, A.I. Ekimov,
I.A. Merkulov, A.L. Efros, M. Rosen, G. Couino,
T. Gacoin and J.P. Boilot | 547 | Giant internal magnetic fields in Mn doped nanocrystal quantum dots |
| A.S.T. Pires | 551 | Temperature-dependent energy gap in the spin-1/2 alternating Heisenberg antiferromagnet in one dimension |
| V. Bermúdez, D. Callejo, F. Caccavale, F. Segato,
F. Agulló-Rueda and E. Diéguez | 555 | On the compositional nature of bulk doped periodic poled lithium niobate crystals |
| | I | Keywords |

VOLUME 114, NUMBER 11

(Published 12 May 2000)

CONTENTS

- | | | |
|--|-----|--|
| J. Hayashi, I. Shirotni, Y. Tanaka, T. Adachi,
O. Shimomura and T. Kikegawa | 561 | Phase transitions of LnSb (Ln =lanthanide) with NaCl-type structure at high pressures |
|--|-----|--|

K.W. Sulston and B.L. Burrows	567	Transmission of neutrons through non-periodic magnetic lattices
V.F. Sapega, T. Ruf and M. Cardona	573	Spin-flip Raman scattering in Mn-doped GaAs: exchange interaction and g factor renormalization
H. Yi, C.S. Hong and N.H. Hur	579	Theoretical considerations on the transport property of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ in the paramagnetic regime
S. Bhattacharyya, S.S.N. Bharadwaja and S.B. Krupanidhi	585	Growth and study of $\text{SrBi}_2(\text{Ta}, \text{Nb})_2\text{O}_9$ thin films by pulsed excimer laser ablation
S. Roy and A.J. Pal	589	Transient electroluminescence under double rectangular voltage pulses in light-emitting devices based on Evans blue
E.I. Rashba, M.D. Sturge, H.W. Yoon and L.N. Pfeiffer	593	Hidden symmetry and the magnetically induced ‘‘Mott transition’’ in quantum wells containing an electron gas
X. Duan, W. Luo, W. Wu and J.S. Yuan	597	Dielectric response of ferroelectric relaxors
N. Okawa, H. Tanaka, R. Akiyama, T. Matsumoto and T. Kawai	601	Effects of film thickness on surface flatness and physical properties in $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ thin films investigated by scanning tunneling microscopy
P.N. Rogers and R.N. Shelton	607	Structural and magnetic characterizations of single-crystal $(\text{Na}_{1-x}\text{Ca}_x)\text{V}_2\text{O}_5$: charge-ordering and spin-ordering in vanadate systems
R.-P. Wang, S.-H. Pan and Y.-L. Zhou	613	Stress reduction by ion bombardment in CeO_2 films

I Keywords

VOLUME 114, NUMBER 12

(Published 17 May 2000)

CONTENTS

C.B. Azzoni, M.C. Mozzati, A. Paleari, V. Massarotti, M. Bini and D. Capsoni	617	Magnetic evidence of different environments of manganese ions in Mn-substituted strontium titanate
B. Gil	623	Elementary description of the optical properties of GaAsN alloys with small nitrogen content
C.P. Chang	627	Magneto-exciton in the thin AlAs/GaAs quantum well in an in-plane magnetic field
B. Bucher, J. Malar, J. Karpinski and P. Wachter	633	Coherence effects above T_c in $\text{YBa}_2\text{Cu}_4\text{O}_8$
L.-g. Liu	637	Inadequacy of linear pressure dependence of vibrational frequency
M. Mahesh Kumar and E.V. Sampathkumaran	643	Magnetic and electrical resistance behaviour of the oxides, $\text{Ca}_{3-x}\text{Y}_x\text{LiRuO}_6$ ($x = 0.0, 0.5$ and 1.0)
V. López-Richard, G.E. Marques and C. Trallero-Giner	649	Anomalous Landé factor in narrow-gap semiconductor heterostructures
T. Banerjee, R.N. Viswanath, D. Kanjilal, R. Kumar and S. Ramasamy	655	Positron lifetime studies of 100-MeV oxygen irradiated Pb-doped Bi-2223 superconductors
L.P. Sosman, A.D. Tavares Jr., R.J.M. da Fonseca, T. Abritta and N.M. Khaidukov	661	Study of optical properties of Cr^{3+} ions in $\text{Cs}_2\text{NaAlF}_6$ single crystals

I Volume 114 Index

XI Author Index

XVII Keywords



**"NO COPIES IN WHATEVER FORMAT MAY BE MADE OF
MATERIAL IN THIS MICROFORM. FOR PERMISSIONS
CONTACT THE COPYRIGHT HOLDER ELSEVIER
SCIENCE LTD. THE BOULEVARD, LANGFORD LANE,
KIDLINGTON, OXFORD, ENGLAND OX5-1GB."**

